

**Multimedia im Netz**  
**Online Multimedia**  
**Winter semester 2015/16**

Tutorial 09 – Minor Subject




# Today's Agenda

- Quick Test Discussion
- Breakout Session: Assignment 08 (Animations)
- Watermarking with jQuery
- Multimedia Content in HTML5
- Round-up

# Code-Along: Assignment 08 - Task 1

Width: 54 | Height: 24



User changes values

Width: 15 | Height: 24



# Watermarking

# Digital Watermarks



- Information about a document
- Help to detect authenticity
- Classification (General):
  - Recognizable vs. hidden
  - Universal vs. individual
- Characteristics (best case):
  - Security (attacks to remove watermarks fail)
  - Robustness (e.g. printing an image and then scanning it)
  - Capacity (as much as possible)
  - Efficiency (inserting watermarks is not costly)

# jQuery Plugins

- There are multiple plug-ins that allow rendering watermarks onto images
- We will use this plugin for the tutorial / assignment:  
<https://github.com/baivong/watermark>

Image: Tobias Seitz 2015



# Breakout: Client-Side Watermarking

- Use the Watermark jQuery Plug-In
- TODOs
  - Create an HTML File (or use the breakout.html from the resources)
  - Insert at least one image
  - Give the image the “watermark” class
  - Include jQuery
  - Include the Watermark jQuery Plugin
  - Call the .watermark() function with appropriate parameters
- We included a couple of images you can use in the ZIP archive for this tutorial.
- Time frame: 20 Minutes

# **Multimedia: Audio & Video on Websites**



# HTML5

HTML5 introduced a bunch of new features:

– New Elements:

- `<canvas></canvas>`
- **`<audio></audio>`**
- **`<video></video>`**



Today

- More: [http://www.w3schools.com/html/html5\\_new\\_elements.asp](http://www.w3schools.com/html/html5_new_elements.asp)

– Form features (examples):

- Wildcards
- Validation

– Drag and Drop



# Video-Element

```
<video controls>
  <source src="movie.mp4" type="video/mp4">
  <source src="movie.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

- Not all browsers support all video formats:

Browser	MP4	WebM	Ogg
Internet Explorer	Yes	No	No
Chrome	Yes	Yes	Yes
Firefox	Yes*	Yes	Yes
Safari	Yes	No	Yes

\* [http://www.w3schools.com/tags/tag\\_video.asp](http://www.w3schools.com/tags/tag_video.asp)

# Audio-Element

```
<audio>  
  <source src="audio.ogg" type="audio/ogg">  
  <source src="audio.mp3" type="audio/mpeg">  
  <source src="audio.wav" type="audio/wav">  
  Your browser does not support the audio element.  
</audio>
```

- Not all browsers support all video formats:

Browser	MP3	WAV	Ogg
Internet Explorer	Yes	No	No
Chrome	Yes	Yes	Yes
Firefox	Yes	Yes	Yes
Safari	Yes	Yes	Yes

\* [http://www.w3schools.com/tags/tag\\_audio.asp](http://www.w3schools.com/tags/tag_audio.asp)

# Methods and Attributes (video & audio)

- **Methods**
  - `play()`
  - `pause()`



- **Attributes (selected)**
  - `paused`
  - `muted`
  - `volume`
  - `currentTime`
  - `duration`

[http://www.w3.org/wiki/HTML/Elements/video#IDL\\_Attributes\\_and\\_Methods](http://www.w3.org/wiki/HTML/Elements/video#IDL_Attributes_and_Methods)

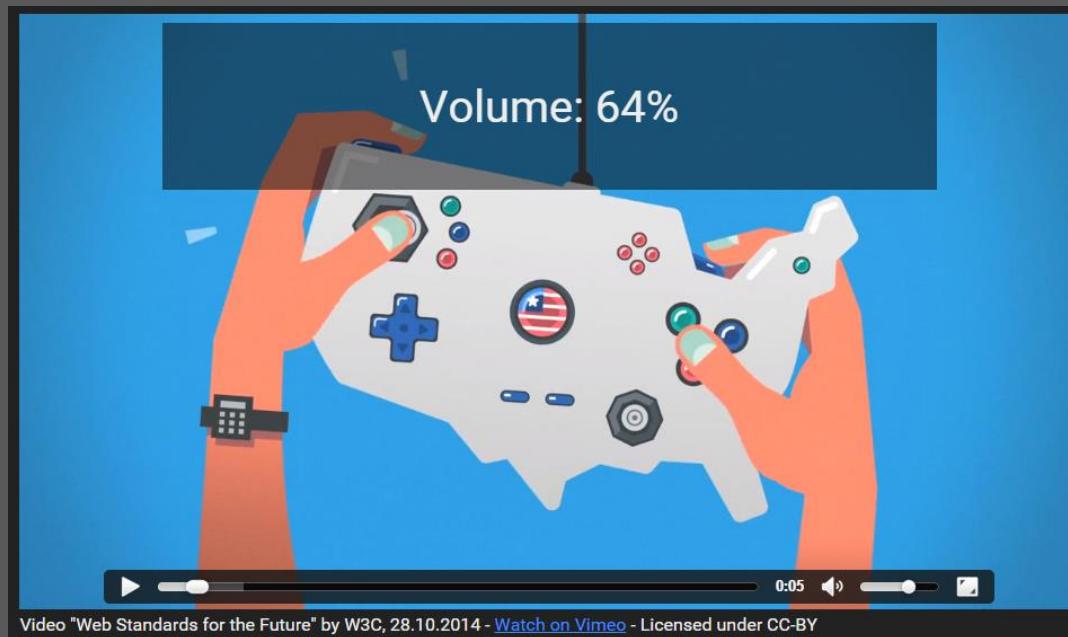
# Media Events

- The video element fires certain events, among others:
  - abort  
Playback was aborted
  - ended  
Playback has ended
  - pause  
playback was paused
  - play  
playback is running
  - timeupdate  
the currently displayed playback time has changed.

[http://www.w3.org/wiki/HTML/Elements/video#Media\\_Events](http://www.w3.org/wiki/HTML/Elements/video#Media_Events)

# Breakout: Video Player Feedback

- The default feedback of the built-in video player is rare.
- Our goal: show a more obtrusive PopUp for certain events.
- Use the file “videoplayer.html” from the tutorial resources.
- Example: Show current volume level:



# Round-up

1. What is problematic about watermarks that are rendered inside the browser?
2. Name an example for each of these types of watermarks:
  - a) Invisible
  - b) Recognizable
  - c) Universal
  - d) Individual
3. Name three events that are fired with the video element.

# Announcements

- The tutorial on December 23<sup>rd</sup> will be canceled!
- We'll discuss the solution to the theoretical tasks after the Christmas break.
- Merry Christmas! See you next year!



**Thanks!**

**What are your questions?**